REMARKS

Amendments To The Specification

Applicants have carefully considered the rejections raised in the Action dated June 28, 2005. As a result, the specification including claims have been amended to comply with the Examiner's requirements as outlined herebelow.

The new sheet of drawings showing Figures 2, 2a and 2b has been objected to for lacking an appropriate label. Responsively the drawing sheet containing Figures 2, 2a and 2b has been amended to replace the label "New drawing Sheet" with the appropriate label --New Sheet--.

Furthermore, with reference to the Examiner's comments under "Election/Restrictions", claim 31 and all other claims of non-elected species have been identified by using the claim status identifier "withdrawn".

The claims have been amended to more particularly point out and claim the present invention. Particularly, claim 1 has been amended to recite

"a high voltage pin electrode" in line 4; and

"the ground electrode having a second surface area sufficiently larger than the first surface area of said pin electrode to give a pin-to-surface electrode configuration such that when a high voltage is applied to the high voltage pin electrode" in lines 9 to 11.

These amendments are fully supported by the present disclosure on page 12, lines 6 to 9 and on page 13, lines 8 to 21 where the phrase "pin-to-surface configuration" is explicitly used and described.

The Summary of Invention in the description pages has also been amended to reflect the above-mentioned amendments to the claim 1.

Patentability of the Claims Over the Cited References

Claims 1-4 have been rejected under 35 U.S.C. § 102(b) as being anticipated by the reference United States Patent No. 4,805,069 issued to

Nagasaka et al. Reconsideration of the grounds for rejection under 35 U.S.C. § 102(b) is respectfully solicited for the following reasons.

The Examiner has asserted on page 4 of the Examiner's Report, from the 4th line from the bottom of the page that:

*"Further, with regard to the recitation "such that when a high voltage is applied to the high voltage electrode, an electrical field produced in a vicinity of the ground electrode is sufficiently low to prevent arc discharging occurring in the vicinity of the ground electrode in the chamber", **it can reasonably be assumed that arch discharging would also be prevented in the same "vicinity of the ground electrode" region of the apparatus shown in the Figure 3 embodiment of Nagasaki et al. even though not expressly discussed in the disclosure of Nagasaki et al.** since the structure as recited in claim 1 is anticipated."*

Applicants respectfully disagree with this assertion for the following reasons. The structure disclosed in Nagasaki falls within the category of "pin-to-pin electrode configuration" described in Nagasaki, for example in column 5 lines 5 to 10 where these are **both** electrodes are referred to as "**needle electrodes**". In other words, the electrode configuration in Nagasaki is a "pin-to-pin electrode configuration" while amended claim 1 recites a "pin-to-surface electrode configuration".

This "pin-to-pin electrode configuration" taught by Nagasaki et al. gives a very different result from the "pin-to-surface electrode configuration" of the present claim 1. Specifically, Nagasaki et al. makes very clear that with the pin-to-pin configuration, ***a plasma or arc discharge is formed at the tips of both electrodes***. This is disclosed in column 5, lines 14 to 17 where it is disclosed that "***and at the tip ends of the respective electrodes is respectively formed plasma***".

Therefore, Applicants respectfully assert that in fact Nagasaki clearly teaches an arc discharge formed in the vicinity of **both** electrodes and thus arc discharging must in fact be present at both electrodes. This is why at many places in the Nagasaki the two electrodes are referred to as "plasma electrodes", for example, in column 7, lines 21 to 29, lines 53 to 58, column 8, lines 34 to 40 just to mention a few examples. Applicant has clearly described the problem with the "pin-to-pin electrode configuration" in several places in the present description, namely on page 12, lines 18 to page 13, line 7.

In contrast, the "pin-to-surface electrode configuration" of present claim 1 does not produce a plasma at the ground electrode as recited in claim 1 by the feature:

"the ground electrode having a second surface area sufficiently larger than the first surface area of said pin electrode to give a pin-to-surface electrode configuration ***such that when a high voltage is applied to the high voltage pin electrode, an electrical field produced in a vicinity of the ground electrode is sufficiently low to prevent arc discharging occurring in the vicinity of the ground electrode in the chamber***".

The surprising result obtained with this "**pin-to-surface electrode configuration**" of present claim 1 is that the discharging or plasma occurs only in the vicinity of the high voltage pin electrode and not in the vicinity of the ground electrode, as described on page 11, lines 11 to 17. The Examiner's attention is directed also to page 12, lines 3 to page 13, line 7 where it is clearly disclosed the difference in operation between the pin-to-pin and pin-to-surface electrode configurations. Additionally, on page 13, lines 8 to 21 it is clearly disclosed that with the pin-to-surface configuration of present claim 1, higher voltages can be applied to the high voltage pin electrode without sparking occurring which leads to the result of less powder coating the ground electrode. This is a major problem

which the present invention solves, namely buildup of powder curing on the ground electrode and higher powder charging efficiency with respect to the pin-to-pin configuration, see lines 10 to 15 on page 13 of the present application, and particularly lines 16 to 21 on page 13. The Examiner's is also invited to compare the present disclosure on page 13, lines 8 to 10 regarding sparking, with Nagasaki's embodiment in Figure 6, described in column 8, lines 48 to 50 where it is taught the needle electrodes are arranged to produce sparking.

The whole point of the present invention is to provide a powder coating apparatus which avoids the known problem of powder buildup on the ground electrode surface which severely reduces the efficiency of the apparatus during operation.

Applicants believe that since the electrode configuration of Nagasaki is clearly "pin-to-pin" and a plasma discharge is present at both electrodes, it really does not matter if there are discernable differences in surface area as relied upon by the Examiner. Nagasaki appears to use different curvatures of radii of the two electrodes and slightly different surface areas to control the ion current in the vicinity of each, for example in column 5, lines 17 to 23, **not** to avoid formation of an arc discharge in the vicinity of one of the electrodes. Therefore, since Nagasaki is clearly teaching a "pin-to-pin electrode configuration" and also explicitly teaches formation of an arc discharge in the vicinity of each electrode, it is clearly teaching away from the present invention embodied in claim 1.

In view of these quite distinct differences, Applicants respectfully submit the subject matter of claims 1 to 4 is not disclosed in Nagasaki or any of the other cited references.

In view of the foregoing, reconsideration and withdrawal of the rejections of claims 1 to 4 is respectfully solicited and favorable consideration and

allowance of claims 1 to 4 is requested. Applicants acknowledge that the Examiner has indicated claims 5-12 recite patentable subject matter.

Should the Examiner have any questions regarding the allowability of the claims with respect to the art, it would be appreciated if the Examiner would contact the undersigned attorney-of-record at the telephone number shown below for further expediting the prosecution of the application.

Respectfully submitted,

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Amendments to the Drawings

The attached drawing sheet has been revised to replace the label "New drawing Sheet" with an appropriate label --New Sheet--. This sheet containing Figures 2, 2a and 2b replaces the drawing sheet containing Figures 2, 2a and 2b which was previously filed under the label of "New drawing Sheet".

Attachment: Replacement Sheet containing Figures 2, 2a and 2b under the appropriate label --New Sheet--.